

Claims:

1. A method for collecting radiation comprising:
disposing an electromechanical radiation collection device in a roll to collect radiation impinging the roll.
2. The method of claim 1 and further comprising:
measuring characteristics of the radiation.
3. The method of claim 2, wherein the radiation is continuously collected and measured.
4. The method of claim 1, wherein the roll has an outer surface and the collection device is disposed at a plane tangential to the outer surface.
5. The method of claim 1, wherein the roll has an outer surface and the collection device is disposed radially inward from a plane tangential to the outer surface.
6. The method of claim 1 and further comprising:
emitting radiation from a radiation source; and
disposing a web between the radiation source and the roll.
7. The method of claim 6, wherein the roll includes an outer surface having a series of patterns, which form seams between the patterns and further comprises:
disposing the collection device at a seam at the outer surface.
8. The method of claim 6, wherein the web includes at least one coating layer.

9. The method of claim 1 and further comprising:
emitting radiation from a radiation source; and
measuring characteristics of the collected radiation.
10. The method of claim 9 and further comprising:
calibrating the radiation source using measured characteristics.
11. The method of claim 6, further comprising:
collecting radiation at a plurality of points transversely across the web.
12. The method of claim 1, wherein the step of collecting further comprises:
collecting radiation at a plurality of points transversely across the roll.
13. The method of claim 1, wherein the radiation collected is electromagnetic in character.
14. The method of claim 1, wherein the radiation collected is particle type radiation.
15. The method of claim 2, wherein said measured characteristic includes at least one of, energy present in the collected radiation, energy distribution of the collected radiation, polarization of the collected radiation, or accelerated particles in the collected radiation.

16. The method of claim 1 and further comprising:
emitting radiation from a first radiation source;
disposing a first web between the radiation source and the roll;
collecting radiation with the collection device;
measuring characteristics of the collected radiation;
emitting radiation from a second radiation source;
disposing a second web between the radiation source and the roll;
collecting radiation with the collection device;
measuring characteristics of the collected radiation; and
comparing the measured characteristics of the radiation collected from
the first radiation source with the radiation collected from the second
radiation source.
17. The method of claim 2 and further comprising:
processing the measured characteristics with computer software.
18. A method for measuring radiation comprising:
disposing a radiation collecting device in a roll, wherein the roll has an outer
surface and the collection device is disposed at a plane tangential to the
outer surface;
disposing a web between a radiation source and the collection device;
collecting radiation directed at the roll; and
measuring characteristics of the collected radiation.
19. An apparatus comprising:
a roll having an outer surface; and
a radiation collection device disposed in the roll.
20. The apparatus of claim 22, and further comprising:
A radiation emitter directed at the roll.

21. The apparatus of claim 20 and further comprising:
a measurement device remotely disposed from the collection device and
connected to the collection device so as to receive radiation collected
by the collection device.
22. The apparatus of claim 21, wherein the measurement device is disposed
inside the roll or disposed outside the roll .
23. The apparatus of claim 21, wherein the collection device continually receives
radiation and substantially simultaneously delivers the radiation to the measurement device.
24. The apparatus of claim 19 and further comprising:
a measurement device connected to the collection device.
25. The apparatus of claim 19 and further comprising:
a radiation source; and
a web disposed about a portion of the roll wherein the web is disposed
between the radiation source and the roll.
26. The apparatus of claim 25 and further comprising:
a measurement device connected to the collection device so as to receive radiation
collected by the collection device, wherein the measurements from the measurement
device are used to calibrate the radiation source.
27. The apparatus of claim 19 and further comprising:
an opening sufficient to allow passage of radiation disposed in the outer
surface of the roll, wherein the collection device is disposed within the
opening.

28. The apparatus of claim 27 and further comprising:
a drive assembly connected to the collection device, wherein the drive assembly operates to translate the collection device along the length of the opening.
29. The apparatus of claim 27, wherein the opening traverses the longitudinal length of the roll.
30. The apparatus of claim 27, wherein the opening is covered by a window transparent to radiation collected by the collection device.
31. An apparatus comprising:
a roll having an outer surface and an opening sufficient to allow passage of radiation disposed in the outer surface;
a radiation collection device movably disposed in the opening;
a measurement device remotely disposed from the collection device and connected to the collection device so as to receive radiation collected by the collection device; and
a drive assembly connected to the collection device, wherein the drive assembly operates to translate the collection device along the length of the opening.